

## DAFTAR PUSTAKA

- Absor, MAU., 2015, Density-Functional Theory Based Calculation Of Spin-Orbit Interaction in ZnO, *Disertasi*, Universitas Kanazawa, Japan.
- Absor, MAU., F Ishii, H Kotaka, M Saito, 2015, Persistent Spin Helix on Wurtzite ZnO Surface: First-Principles Density-Functional Study, *Applied Physics Express* 8 (7), 073006.
- Ando, Y., 2013, Topological Insulator Materials, *Journal of the Physical Society of Japan*.
- Aras, M., dan Ç. Kılıç, 2018, Electrical Tuning of Spin Splitting in Bi-Doped ZnO Nanowires, *Physical Review B* 97, 035405, doi: 10.1103/PhysRevB.97.035405
- Aras, M., S. G. Kılıç, dan Ç. Kılıç, 2017, Doping-Induced Spin-Orbit Splitting in Bi-Doped ZnO Nanowires. *Physical Review B* 95, 155404, doi: 10.1103/PhysRevB.95.155404.
- Awschalom, D. dan N. Samarth, 2009, Spintronics without Magnetism, *Physics* 2, 50 (2009).
- Beiser, A., 2003, *Concepts of Modern Physics*, Sixth Edition, McGraw-Hill Companies, Inc.
- Birch F., 1947, Finite Elastic Strain of Cubic Crystals. *Physical Review*. 71.809.
- Blundell, S., 2001, *Magnetism in Condensed Matter*, Departemen of Physics University of Oxford.
- Botsch, L., I. Lorite, Y. Kumar, dan P. Esquinazi, 2017, Indirect Experimental Evidence of A Persistent Spin Helix in H + Implanted Li-Doped ZnO By Photogalvanic Spectroscopy, *Physical Review B* 95, 201405(R), doi: 10.1103/PhysRevB.95.201405
- Bychkov, Yu A. dan E.I Rashba, 1984, Properties of a 2D Electron Gas with Lifted Spectral Degeneracy, *JETP Letter* Vol 39 No. 2.
- Chiang, T. C., 2008, Quantum Physics of Thin Metal Films, *AAPPS Bulletin* 2008, Vol.18, No.2.

- Cotton, F. A., 1990, *Chemical Applications of Group Theory*, A Wiley-Interscience Publication.
- Datta, S. dan Das, B., 1990, Electronic Analog of The Electro Optic Modulator, *Applied Physics Letters*, 56(7), pp. 665–667, doi: 10.1063/1.102730.
- Dresselhaus G., 1955, Spin-Orbit Coupling Effects in Zinc Blende Structures, *Physical Review* Vol. 100 No. 2.
- Fert, A., 2008, Nobel Lecture: Origin, Development, and Future of Spintronics, *Reviews of Modern Physics*, Volume 80, doi: 10.1103/RevModPhys.80.1517.
- Fert, A., 2008, The Present and The Future of Spintronics, *Thin Solid Films* 517. doi:10.1016/j.tsf.2008.08.172
- Franz, M., S. Appelfeller, H. Eisele, P. Ebert, dan M. Dähne, 2019, Valence Band Structure and Effective Masses of GaN(1010), *Physical Review B* 99, 195306. doi: 10.1103/PhysRevB.99.195306
- Ganichev, S. D. dan L. E. Golub, 2014, Interplay of Rashba/Dresselhaus Spin Splittings Probed by Photogalvanic Spectroscopy-A Review, *Physica Status Solidi B* 251, No. 9.
- Gil, B., 2014, *Physics of Wurtzite Nitrides and Oxides: Passport to Devices*, Oxford University Press.
- Hellström, M., D. Spångberg, K. Hermansson, dan P. Broqvist, 2012, Cu Dimer Formation Mechanism on The ZnO(1010) Surface, *Physical Review B* 86, 235302.
- Henck, H., Z. B. Aziza, O. Zill, D. Pierucci, C. H. Naylor, M. G. Silly, N. Gogneau, F. Oehler, S. Collin, J. Brault, F. Sirotti, F. Bertran, P. Le Fèvre, S. Berciaud, A. T. C. Johnson, E. Lhuillier, J. E. Rault, dan A. Ouerghi, 2017, Interface Dipole and Band Bending in the Hybrid p-n Heterojunction MoS<sub>2</sub>/GaN(0001), *Physical Review B* 96, 115312.
- J E, Inglesfield., 1982, Surface Electronic Structure, *Rep. Prog. Phys.*, Vol. 45.
- Jaffe, J. E., R. Pandey dan P. Zapol, 1996, Ab Initio Prediction of GaN (1010) and (110) Anomalous Surface Relaxation, *Physical Review B Volume* 53, Number 8

- Janotti, A. dan C. G Van de Walle, 2009, Fundamentals of Zinc Oxide as A Semiconductor, *Rep. Prog. Phys.* 72 126501 (29pp), doi:10.1088/0034-4885/72/12/126501
- Kang, Y. Gu., S. W. Kim, dan J. H. Cho, 2017, Competing Charge Density Wave and Antiferromagnetism of Metallic Atom Wires in GaN(1010) and ZnO(1010), *Physical Review B* 96, 235416, doi: 10.1103/PhysRevB.96.235416
- Kartzel, H, W. Ptzel, M. Kofferlein, W. Sciessi, M. Steiner, U. Hiller, G.M Kalvius, D.W. Mitchell, T.P. Das, P. Blaha, K. Schwartz, dan M.P Pasternak, 1996, Lattice dynamics and hyperfine interactions in ZnO and ZnSe at high external pressures, *Physiccal Review B Volume 53, Number 17*, doi:10.1103/PhysRevB.53.11425.
- Kato, Y., Myers, R. C., Driscoll, C. D., Gossard, A. C., Levy, J. dan Awschalom, D. D, 2003, Gigahertz Electron Spin Manipulation Using Voltage-Controlled G-Tensor Modulation, *Science*, 299(February), pp. 1201–1205.
- Kaxiras, E., 2003, *Atomic and Electronic Structure of Solids*. Cambridge University Press.
- Kittel, C, 1987, *Quantum Theory of Solid 2nd ed*, New York: John Wiley & Sons.
- Kohanoff, J., 2004, *Electronic Structure Calculations for Solids and Molecules: Theory and Computational Methods*, Cambridge University Press.
- Kohda, M., V. Lechner, Y. Kunihashi, T. Dollinger, P. Olbrich, C. Schönhuber, I. Caspers, V. V. Bel'kov, L. E. Golub, D. Weiss, K. Richter, J. Nitta, dan S. D. Ganichev, 2012, Gate-Controlled Persistent Spin Helix State In (In,Ga) As Quantum Wells, *Physical Review B* 86, 081306 (R).
- Kozulin, A. S. dan A. I. Malyshev, 2019, General Condition for Realizing A Collinear Spin-Orbit Effective Magnetic Field in Two-Dimensional Electron Systems and Its Application to Zinc-Blende and Wurtzite Quantum Wells, *Physical Review B* 99, 035305, doi: 10.1103/PhysRevB.99.035305
- Kuhlen, S., K. Schmalbuch, M. Hagedorn, P. Schlammes, M. Patt, M. Lepsa, G. Güntherodt, dan B. Beschoten, 2012, Electric Field-Driven Coherent Spin Reorientation of Optically Generated Electron Spin Packets in InGaAs. *PRL* 109, 146603, doi: 10.1103/PhysRevLett.109.146603

- Kuykendall, T., P.J. Pauzauskie, Y. Zhang, J. Goldberger, D. Sirbully, J. Denlinger dan P. Yang, 2004, Crystallographic Alignment of High-Density Galium Nitride Nanowire Arrays, *Nature Materials Vol. 3*.
- L. Weston, X. Y. Cui, B. Delley, dan C. Stampfl, 2012, Band Offsets and Polarization Effects in Wurtzite ZnO/Mg 0.25 Zn 0.75 O Superlattices From First Principles. *Physical Review B* 86, 205322. doi: 10.1103/PhysRevB.86.205322
- Landmann, M., E. Rauls, W. G. Schmidt, M. D. Neumann, E. Speiser, dan N. Esser, 2015, GaN m-plane: Atomic Structure, Surface Bands, and Optical Response, *Physical Review B* 91, 035302, doi: 10.1103/PhysRevB.91.035302
- Lee, W. J. dan Y.S. Kim, 2011, Dimer-Vacancy Reconstructions of the GaN and ZnO(10 $\bar{1}$ 1) Surfaces: Density Functional Theory Calculations, *Physical Review B* 84, 115318.
- M. Catti, Y. Noel, dan R. Dovesi, 2003, Full Piezoelectric Tensors of Wurtzite and Zinc Blende ZnO and ZnS by First-Principles Calculations. *Journal of Physics and Chemistry of Solids* 64 2183–2190. doi:10.1016/S0022-3697(03)00219-1.
- Manchon, A., H. C. Koo, J. Nitta, S. M. Frolov dan R. A. Duine, 2015, New Perspectives for Rashba Spin–Orbit Coupling, doi: 10.1038/NMAT4360.
- Martin, R., 2004, *Electronic Structure Basic Theory and Practical Methods*, Cambridge: Cambridge University Press. doi: 10.2277/0521782856.
- Ming, B.M., R. Z Wang, C. Y. Yam, L. C. Xu, W. M. Lau, dan H. Yan, 2016, Bandgap Engineering of GaN Nanowires, *AIP Advances* 6, 055018, doi: 10.1063/1.4951678.
- Moshfegh, A. Z., H.V. Kanel, S.C. Kashyap, dan M. Wuttig, 2003, *Proceedings of the International Workshop on Physics and Technology of Thin Films I W T F*. World Scientific Publishing Co. Pte. Ltd.
- Northrup, J. E. dan J. Neugebauer, 1996, Theory of Ga (10 $\bar{1}$ 0) and (11 $\bar{2}$ 0) Surfaces, *Physical Review B Volume 53, Number 16*
- Ozaki, T, H. Kino, J. Yu, M.J. Han, M. Ohfuchi, F. Ishii, K. Sawada, Y. Kubota, Y.P. Mizuta, T. Ohwaki, T.V.T Duy, H. Weng, M. Toyoda, Y. Okuno, R. Perez, P.P. Bell, M. Ellner, Y. Xiao, A.M. Ito, M. Kawamura, K. Yoshimi, C.-C. Lee, dan K. Terakura, 2016, *User's manual of OpenMX Ver. 3.8*.

- Ozaki, T. dan Kino, H., 2004, Numerical Atomic Basis Orbitals from H to Kr, *Physical Review B*, 69 (19), pp. 1-19. doi: 10.1103/PhysRevB.69.195113.
- Ozaki, T., 2007, *Non Collinear Spin Density Functional Ver. 1.0*. Tersedia di <http://www.openmx-square.org/>
- Ozawa, K., dan K. Mase, 2010, Etallization of ZnO(1010) By Adsorption of Hydrogen, Methanol, and Water: Angle-Resolved Photoelectron Spectroscopy, *Physical Review B* 81, 205322. DOI: 10.1103/PhysRevB.81.205322
- Özgür, Ü., Ya. I. Alivov, C. Liu, A. Teke, M. A. Reshchikov, S. Doğan, V. Avrutin, S. J. Cho, dan H. Morkoç, 2005, A Comprehensive Review of ZnO Materials and Devices, *J. Appl. Phys.* 98, 041301.
- Ozgür, U., D. Hofstetter, dan H. Morkoç, 2010, ZnO Devices and Applications: A Review of Current Status and Future Prospects, *Proceedings of the IEEE* 98, issue 7, 1255-1268.
- Palummo, M., C. M. Bertoni, L. Reining dan F. Finocchi, 1993, The Electronic Structure of Gallium Nitride. *Physica B* 185.
- Prateek, U., Vishwakarma, dan Kirti, 2016, Review of Zinc Oxide (ZnO) Nanoparticles Applications and Properties, *International Journal of Emerging Technology in Computer Science And Electronics (IJETCSE)* ISSN: 0976-1353 Volume 21 Issue 2.
- Qi, L., Y. Qi, Z. Chai, Y.Q.M. Hellström, D. Spångberg, K. Hermansson, dan P. Broqvist, 2019, Post-Annealing Induced Oxygen Vacancy Mediated Non-Polar ZnO Films With Excellent Optoelectronic Performance, *Ceramics International* 45, 8388-8394
- Silva, W. S., C. Stiehler, E. A. Soares, E. M. Bittar, J. C. Cezar, H. Kuhlenbeck, H. J. Freund, E. Cisternas, dan F. Stavale, 2018, Hydrogen-Induced Metallization on The ZnO (0001) Surface, *Physical Review B* 98, 155416.
- Simon, E., A. Szilva, B. Ujfalussy, B. Lazarovits, G. Zarand, dan L. Szunyogh, 2010, Anisotropic Rashba Splitting of Surface States from The Admixture of Bulk States: Relativistic Ab Initio Calculations and **k.p** Perturbation Theory, *Physical Review B* 81, 235438, doi: 10.1103/PhysRevB.81.235438
- Soumyanarayanan, A., N. Reyren, A. Fert, dan C. Panagopoulos, 2016, Emergent Phenomena Induced by Spin-Orbit Coupling at Surfaces and Interfaces, *Nature* Vol 539.

- Stampfl, C. dan C. G. Van de Walle. 1999. Density-Functional Calculations For III-V Nitrides using The Local-Density Approximation and The Generalized Gradient Approximation, *Physical Review B* Volume 59, Number 8.
- Supatukul, C., S. Pramchu, A.P. Jaroenjittichai, dan Y. Laosiritaworn, 2016, Density Functional Theory Investigation of Surface Defects in Sn-doped ZnO, *Surface and Coatings Technology* Volume 298, doi:10.1016/j.surfcoat.2016.04.013.
- Wang, Z. L., 2004, Zinc Oxide Nanostructures: Growth, Properties and Applications, *J. Phys.: Condens. Matter* 16 (2004) R829–R858.
- Xia, S., L. Liu, Y. Kong dan M. Wang, 2016, Uniaxial Strain Effects on The Optoelectronic Properties of GaN Nanowire, *Superlattices and Microstructures* 97.
- Xie, Y., Y. Qian dan S. Zhang, 1996, Coexistence of wurtzite GaN with zinc blende and rocksalt studied by x-ray power diffraction and high-resolution transmission electron microscopy, *Appl.Phys.Lett.*69, 334.
- Yukawa, R., K. Ozawa, S. Yamamoto, H. Iwasawa, K. Shimada, E. F. Schwier, K. Yoshimatsu, H. Kumigashira, H. Namatame, M. Taniguchi, dan I. Matsuda, 2016, Phonon-Dressed Two-Dimensional Carriers on The ZnO Surface, *Physical Review B* 94, 165313.
- Zettili, N., 2009, *Quantum Mechanics: Concepts and Applications 2nd ed*, Jacksonville State University, Jacksonville, USA.
- Zhou, H, L.Wu, H. Q Wang, J.C Zheng, L. Zhang, K. Kisslinger, Y. Li, Z. Wang, H. Cheng, S. Ke Y. Li, J. Kang dan Y. Zhu. Interfaces Between Hexagonal and Cubic Oxides and Their Structure Alternatives. *Nature Communications*, 8: 1474, 2017. doi: 10.1038/s41467-017-01655-5.
- Žutić, I., J. Fabian dan S. D. Sarma, 2004, Spintronics: Fundamentals and Applications, *Reviews Of Modern Physics*. Volume 76.